

Title (en)  
Apparatus for manipulating a pallet.

Title (de)  
Handhabungsvorrichtung für Stapelplatten.

Title (fr)  
Dispositif pour manipuler une palette.

Publication  
**EP 0402976 A1 19901219 (EN)**

Application  
**EP 90201373 A 19900530**

Priority  
NL 8901522 A 19890616

Abstract (en)  
An apparatus for manipulating a pallet (6) for supporting and carrying particularly cylindrical shaped products, the pallet comprising first (6 min ) and second (6 sec ) pallet parts to be secured together, is characterised in that the apparatus includes coupling means for releasable engagement with the pallet (6), the coupling means comprising at least one pair of engagement members (12,13;32 min ;33 min ;32 sec ;33 sec ), the or each pair comprising first (12;32 min ;32 sec ) and second (13;33 min ;33 sec ) engagement members which are displaceable relative to each other along an axis, the or each first engagement member (12;32 min ;32 sec ) being provided with first clamping means (9;50) for clamping a portion of the first pallet part (6 min ) and the or each second engagement member (13;33 min ;33 sec ) being provided with second clamping means (10;50) for clamping a portion of the second pallet part (6 sec ), whereby actuation of the first clamping means (9;50) on the or each first engagement member (12;32 min ;32 sec ) couples the first pallet part (6 min ) to the first engagement member or members (12;32 min ;32 sec ) and actuation of the second clamping means (10;50) on the or each second engagement member (13;33 min ;33 sec ) couples the second pallet part (6 sec ) to the second engagement member or members (13;33 min ;33 sec ). The engagement members may be formed by first (12) and second (13) portions of forks (5) or by legs (32 min ;32 sec ;33 min ;33 sec ) which engage and clamp the pallet parts (6 min ;6 sec ).

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IPC 8 full level  
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CPC (source: EP US)  
**B66C 1/24** (2013.01 - EP US); **B66C 1/30** (2013.01 - EP US); **B66C 23/005** (2013.01 - EP US)

Citation (search report)  
• [Y] US 2284238 A 19420526 - TODD JOHN W  
• [Y] GB 1267178 A 19720315  
• [A] DE 3620007 A1 19871217 - BAYERISCHE MOTOREN WERKE AG [DE]  
• [A] DE 3300801 A1 19840209 - DANGO & DIENENTHAL MASCHBAU [DE]  
• [A] FR 298504 A  
• [A] US 3033388 A 19620508 - HORSCROFT RICHARD G  
• [A] BE 620271 A  
• [A] US 3301587 A 19670131 - HEIKKINEN LEO L  
• [A] GB 2167039 A 19860521 - TOYO SEIKAN KAISHA LTD, et al  
• [A] US 1693074 A 19281127 - MICHAEL FALCO  
• [A] FR 2431456 A1 19800215 - LIEBHERR HYDRAULIKBAGGER [DE]

Cited by  
ITRA20100018A1; GB2241935B; US5382067A

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